

# Retrospect and Prospect of Studies of Teacher Efficacy in China

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**Abstract:** Teacher efficacy is a powerful variable in educational and psychological studies. And it aroused much attention and interest from Chinese scholars in the past decade, which led to an accumulation of documents in this field. Following an introduction of efficacy studies in the west, the article reviews the brief history of those in China, summarizing the main achievements into four aspects. With an eye on the future development of researches on teacher efficacy in China, some directions are suggested by the author simultaneously.

**Key words:** retrospect; prospect; teacher efficacy

According to the statistics of Ministry of Education of the People’s Republic of China, 202,729,842 students were enrolled in primary and secondary school in 2003, and there were altogether 10,839,986 teachers (including full-time, substitute and part-time teachers) in services. Obviously, as a nation with large population of educational staff, it is necessary to examine the teachers’ psychology. In western countries, the research on teacher efficacy has a history of almost 30 years, and it is an active and robust variable in psychological, educational and psychometric researches. But in China, teacher efficacy is just on the beginning stage. The present study tries to generalize the theoretical and empirical researches on teacher efficacy in China, analyzing the weaknesses and providing the directions in the future.

## 1. Brief Review on Studies of Teacher Efficacy

The concept of teacher efficacy was born with Rand Measure (Armor et al.,1976). With the work of Rotter as a theoretical base, teacher efficacy was described as the extent to which teachers believed that they could control the reinforcement of their actions. Similar definitions includes “teachers’ belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated”(Guskey&Passaro,1994) and “the extent to which the teacher believes he or she has the capacity to affect student performance”(Berman, et al.,1997). The rand measure related with teacher efficacy has only two items which were designed to reveal the extent to which a teacher believed that the consequences of teaching--student motivation and learning---were in hands of teacher. The sum of the two items was called teacher efficacy(TE). In attempt to improve the reliability of the Rand Measure, a number of more complicated instruments were developed upon the tradition of Rand/Rotter, including Teacher Locus of Control (Rose&Medway,1981), Responsibility for Student Achievement

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(Guskey, 1981) and Webb Efficacy Scale(Ashton, et al., 1982).

Another theoretical strand about teacher efficacy came into being in the guide of Bandura's self-efficacy theory. Bandura (1997) defined it as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments", and it is a prediction of competence in certain context. Except for efficacy expectancy, social cognitive theory produces the concept of "outcome expectancy" which is an estimation of consequences of one's behavior at the level of expected self-efficacy (Bandura,1986). The idea of "outcome expectancy" is consistent with "locus of control" which reflects individual beliefs about causal relationship between behavior and outcome. Because efficacy expectancy precedes and helps form outcome expectancy, the Rand/Rotter measure is not an effective tool for detecting the efficacy level as a result. A new route for research on teacher efficacy emerged.

Accordingly, some instruments grew out of Bandura's theory, such as Ashton Vignettes(Ashton, et al., 1984) and Teacher Efficacy Scale (Gibson&Dembo,1984). As a boon to study of teacher efficacy and a blueprint for other field-specific tool, TES was modified into subject—matter specific instruments, for example, Emmer and Hickman(1990) adapted the TES into an efficacy scale with three subsections: efficacy for classroom management and discipline, external influences, and personal teaching efficacy. Riggs and Enochs(1990) yielded the Science Teaching Efficacy Belief Instrument(1990), and Coladarci and Breton(1995) provided an instrument for special education. Nevertheless, Bandura(1997) suggested that items in the measurement were too general to include the multi-facets of the teaching context, and he himself constructed a 30-item instrument with seven subscales: efficacy to influence decision making, efficacy to influence school resources, instructional efficacy, disciplinary efficacy, efficacy to enlist parental involvement, efficacy to enlist community involvement, and efficacy to create a positive school climate.

Teacher efficacy has been proved to be a powerful variable, but there are still lack of consensus on the definition and measurement of this concept. For example, the studies of teacher efficacy have consistently found two separate dimensions or factors, although considerable confusions and debate have arisen over their meaning. The moderate correlations between different measures suggest that they are just describing related constructs, but what does each scales measures accurately capture teacher efficacy and how much is something else? (Tschannen-Moran & Hoy, 2001)

As an endeavor to integrate different theoretical approaches, Tschannen, Hoy and K. Hoy(1998) proposed a theoretical model employing strengths of Rotter's and Bandura's theories, which made a new area for efficacy study. According to the model, two dimensions are related with the level of teacher efficacy, one is analyzing the teaching task and its context, the other is self-perceptions of teaching competence. The interaction of the two factors yields the judgment of the efficacy required by a specific teaching task and context. Using the model as a theoretical base, Tschannen and Hoy(2001) worked out the Ohio State teacher efficacy scale(OSTES) with some hints from Bandura's scale. The OSTES has two forms: a long form with 24 items and a short with 12 items.

## **2. Current Studies of Teacher Efficacy in China**

Looking back upon the history of studies on teacher efficacy in China, it has been just over ten years since the first review published on academic journal of China. The theories of Rotter and Bandura had great influences

on the fields of education and psychology in China, so the concept of teacher efficacy was quickly captured and broadly examined by researchers, which brought out numerous theoretical and empirical studies, especially with the advent of the measure instruments. Now, instead of initial enthusiasm, a mature period is coming. Sheer imitations and confirmations of western studies are questioned under critical and indigenous perspective. To make a comprehensive view, four types of studies on teacher efficacy in China are summarized here:

The first group is the introductions and overviews of efficacy studies in western academia, most of which are summaries based on the foreign documents. Specifically speaking, it covers the analysis and comparison of concepts and theories related with teacher efficacy, for example, locus of control, social cognitive theory and the new model proposed by Hoy and K. Hoy in 1998; introduction of some instruments of teacher efficacy, aggregation of the main conclusions and methodologies employed in the empirical studies.

The second type is theoretical exploration into teacher efficacy. Some articles focus on the practical values of this variable, including (1) the role of teacher efficacy in capabilities demanded by the occupation, the impacts of teacher efficacy on teacher training, teaching behavior, curriculum reform of basic education in China and mental health of teachers, etc.; (2) The factors affecting the teacher efficacy, such as social support, working stress, behaviors of principals and school atmosphere; (3) strategies of improving teacher efficacy; (4) As we know, the term of teacher efficacy was stemmed from western culture, so the culture-resistance of this variable is another topic heatedly debated by scholars. China has a long and unique history of educational culture, but the methodologies employed by most studies are just repetition and confirmation of western practices. Apparently, the cultural difference has not yet been taken into account. However not fully investigated, it gets more attention recently.

The third category is large numbers of empirical studies on teacher efficacy. They can be compressed into three aspects: (1) exploring the structure of teacher efficacy. Following the conventions of western studies, they tried to find out the principle components or dimensions of teacher efficacy aiming at Chinese teachers; (2) investigating the current situation of teacher efficacy in China. For example, teacher efficacy of teachers working in primary and secondary school, teacher efficacy in curriculum reform, comparison of teacher efficacy between excellent and ordinary teachers, comparison of teacher efficacy between physical education teachers and those who are not, comparison of teacher efficacy between experts and novices, etc.; (3) confirming correlations between teacher efficacy and other variables, and here are some which were frequently probed: achievement goal and learning attribution of students, mental health of teachers, burn-out of teachers, working stress, teaching behavior, attribution of teachers and school factors, etc..

The fourth part is revision and creation of teacher efficacy scales. The majority of instruments used in China are translations and revisions of foreign scales to some extent. Chronologically, six scales are listed here: using Webb Efficacy Scale (Ashton, et al., 1982) as a basis, Tao Xin (1995) proposed an instrument with 12 items, trimming 3 items which were considered unsuitable for Chinese teachers from the original edition; The Institute of Developmental Psychology (1995) in Beijing Normal University put forward a teacher efficacy scale with 42 items based on two tools --- Teacher Efficacy Scale (Gibson & Dembo, 1984) and Webb Efficacy Scale (Ashton, et al., 1982), and the scale has two forms: the long form with 42 items and the short with 10 items; Guo-liang Yu (1995) generated one scale with 27 items on the basis of Teacher Efficacy Scale (Gibson & Dembo, 1984); Xing-ting

Huang(1998) made an revision on Ashton Vignettes(Ashton, et al., 1984), producing a scale with 50 items; Using Teacher Efficacy Scale (Hoy & woolfork, 1993) as a groundwork, two scales yielded: one was revised by Jin-Ping Mao (2005) with 20 items, another was completed by Xin-shan Huang (2005) with 10 items. All above are derivations of existed tools, and a creative work constructed by Zhan-yong Ma (2005) apparently has the methodological advantages. Integrating Bandura's self-efficacy theory and Tschannen Moran's new model of teacher efficacy, he applied exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) to the data collected through an questionnaire survey, bringing about Teaching Efficacy Scale for Physical Education Teachers, which was braced by 4 dimensions: class management, explicitness of text presentation, interaction between teacher and students and strategies and skills of teaching.

### **3. Directions for Future Studies of Teacher Efficacy in China**

Although there has accumulated some valuable documents and research experiences on teacher efficacy, the quantity and quality of it remains unsatisfactory on a whole. More intensive and creative efforts rooted in educational practices in China are indispensable for the advance and maturity of efficacy studies.

Firstly, it is well known that the study of teacher efficacy is a typical product of western education and culture, most of the issues and methods employed by Chinese scholars are just copies from the west. As a social phenomenon, education is inevitably tangled with specific culture. Theoretically, cultural variables would have independent and reciprocal effects on education. China has a distinct educational tradition and system from the western countries, which can be embodied in teachers' beliefs about the nature and function of education, role of teachers in society, relationship between teachers and students, etc.. The key point is that how to manipulate the cultural variables in research as to generate the culturally agreeable conclusions? For example, the achievement of students is not only related with teachers' personal efficacy beliefs, but the collective efficacy (Bandura, 1993, 1997). Collectivism is one of the features of Chinese culture, and it undoubtedly has an effect on teachers. Consequently, in what aspects and in what way are the collective teacher efficacy influenced by this cultural distinction? As far as culture is concerned, China is in urgent need of indigenous researches. But there still exit huge obstacle, which lies in that how to transcend the paradigm of simple cross-cultural comparisons which are merely product of western probing mode as to achieve the originality of researches.

Secondly, the Ministry of Education of China decided to rigorously propel the curriculum reform of basic education in 2001, adjusting and reconstructing the content and structure of curriculum system to meet the needs of well-rounded education. It covers three stages of education: preschool, compulsive education (including primary school and junior high school) and general high school. Some cities were selected to carry out a series of experiments on new curriculum. No doubt, it surely aroused the psychological and behavioral changes and adaptations of teachers. So, how stable is the core of beliefs about teacher ability? How is its reevaluation elicited? As for teachers who hold negative efficacy beliefs, what measure can we take to change their beliefs of teaching competence? Just as Gist and Mitchell (1992) noted, further work is needed about "the plasticity of the determinants of self-efficacy: the specific causal factors that are susceptible to change, the extent of probable change, and the practical issues involved in facilitating change". On the contrary, it was found recently that teachers' efficacy doubts may support reform in several ways, challenging the common assumption that teachers'

doubts about their efficacy are inherently problematic for reforms (Wheatly, 2002). Is that true in China and to what extent can we measure the efficacy doubts and apply it to teacher education and educational reform?

Thirdly, different scales are frequently used in empirical studies, and the tools are mainly translations and revisions of foreign tests. Although different reliability coefficients were reported in researches, some crucial issues still deserve to be mentioned: (1) How about the validity of scales when applied to Chinese teachers? (2) Are they measuring the same variable? (3) What is the relationship among different tools? (4) In basis of Bandura's self-efficacy theory and the new model mentioned above, the assessment of teacher efficacy is context---specific, so, measures of general teaching beliefs would be a probable reflection of personality traits instead of efficacy appraisals which are closely connected with specific situations of teaching (Pajares, 1996). However, the balance between specificity and generality has not been adequately considered in working out scales.

Fourthly, in order to know about the route and causes of efficacy development, the longitudinal researches should find their place in efficacy studies. High level efficacy usually lead to successful teaching behaviors which conversely have a positive effect on efficacy judgments in future, strengthening the initial efficacy beliefs, vise versa. As a result, exploring the developmental process of efficacy beliefs has long-term significance, especially the establishing mechanism of initial efficacy beliefs. At the same time, the fluctuation of teacher efficacy in different occupational phases (involving undergraduates in teachers' colleges, pre-service teacher, novices, experts and those who abandon the vacation in mid-way) could be thoroughly examined through longitudinal studies, which would absolutely exert influences on teachers training and their commitment to education in the long run.

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